

Research Data Management: What Are You Waiting For? 研究数据管理：还等什么？

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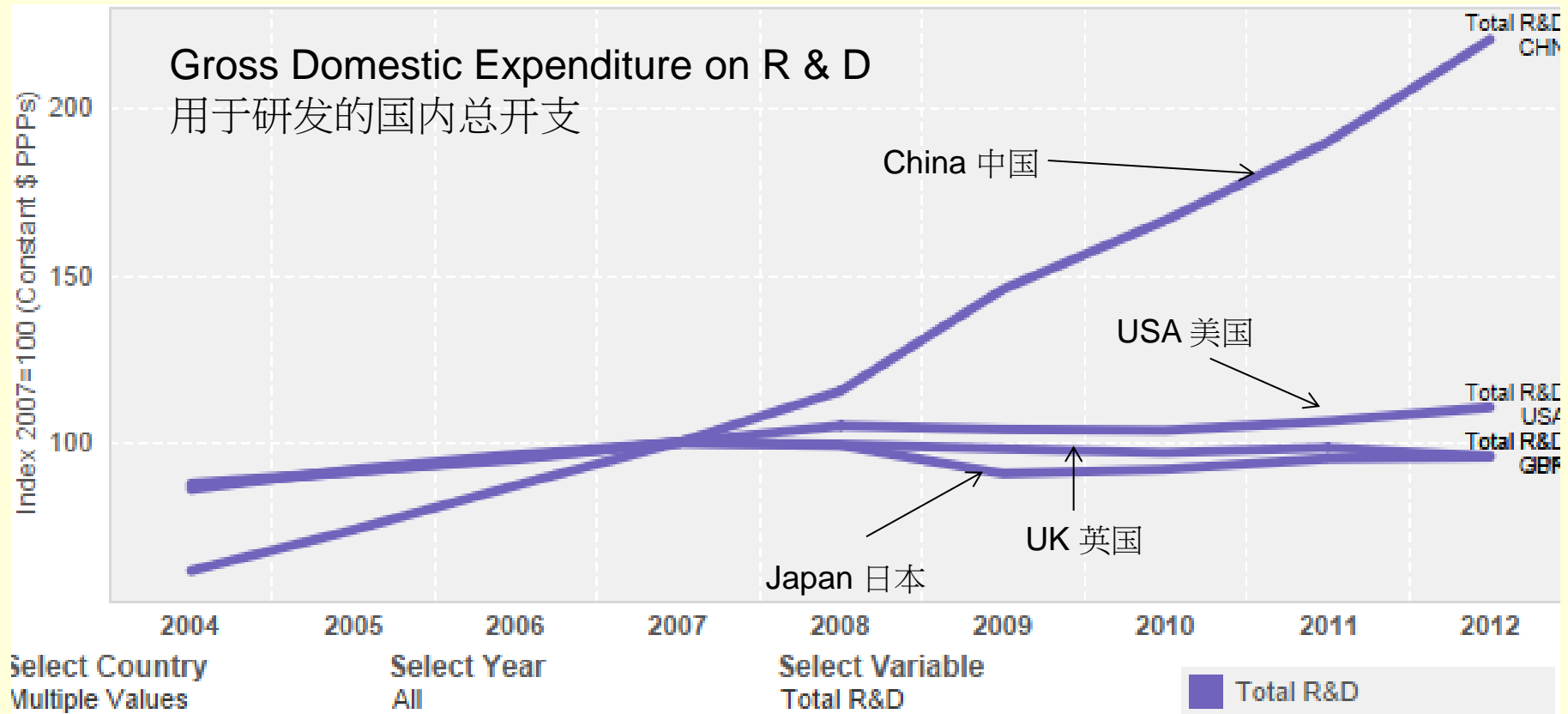
The University of Hong Kong Libraries 香港大学图书馆

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on Chinese Digital Publishing and Digital Libraries
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Changing Research Landscape

转变中的调研大环境

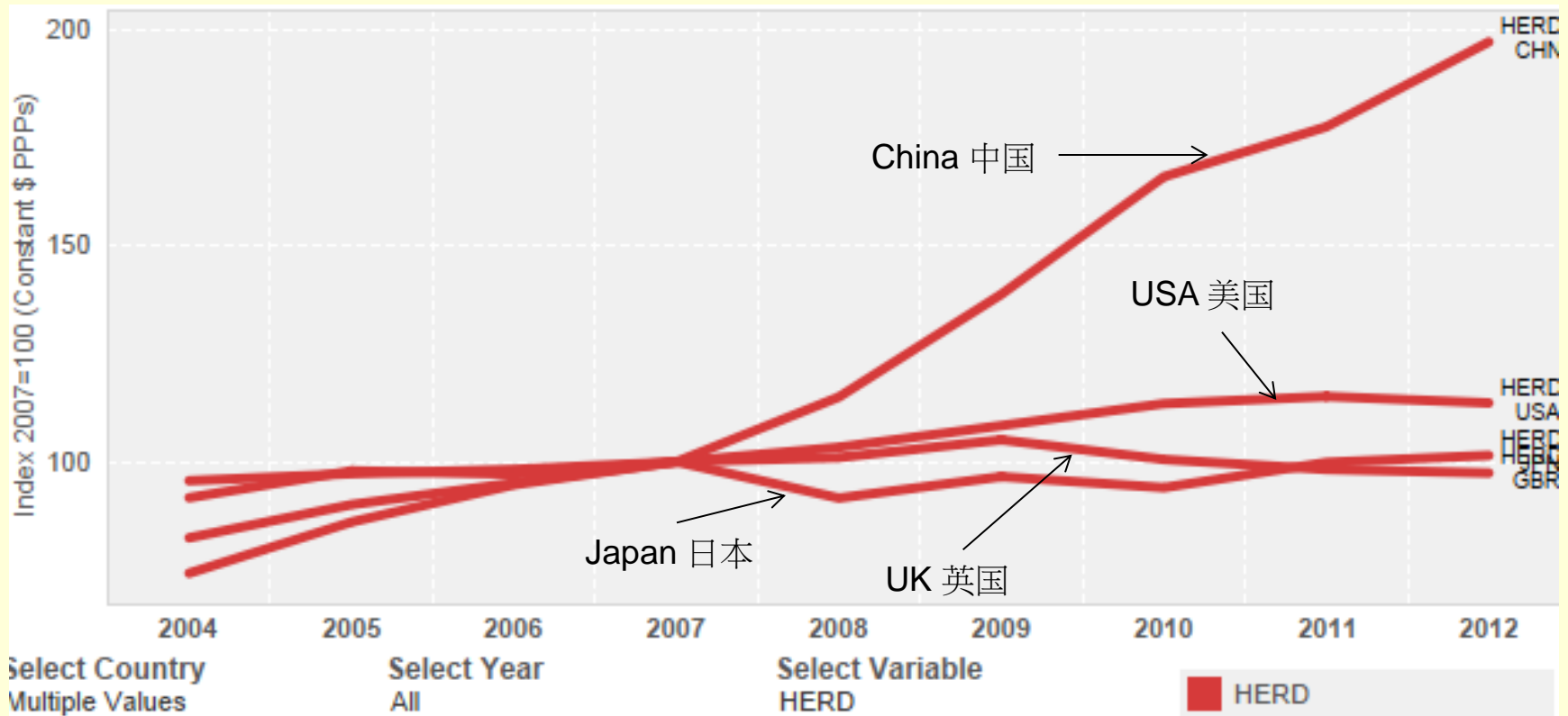
OECD Reports 经济合作与发展组织报告



Source: OECD estimates based on OECD Main Science and Technology Indicators Database, 2014/1.

Retrieved June 17, 2014, from <http://www.oecd.org/sti/inno/msti.htm>

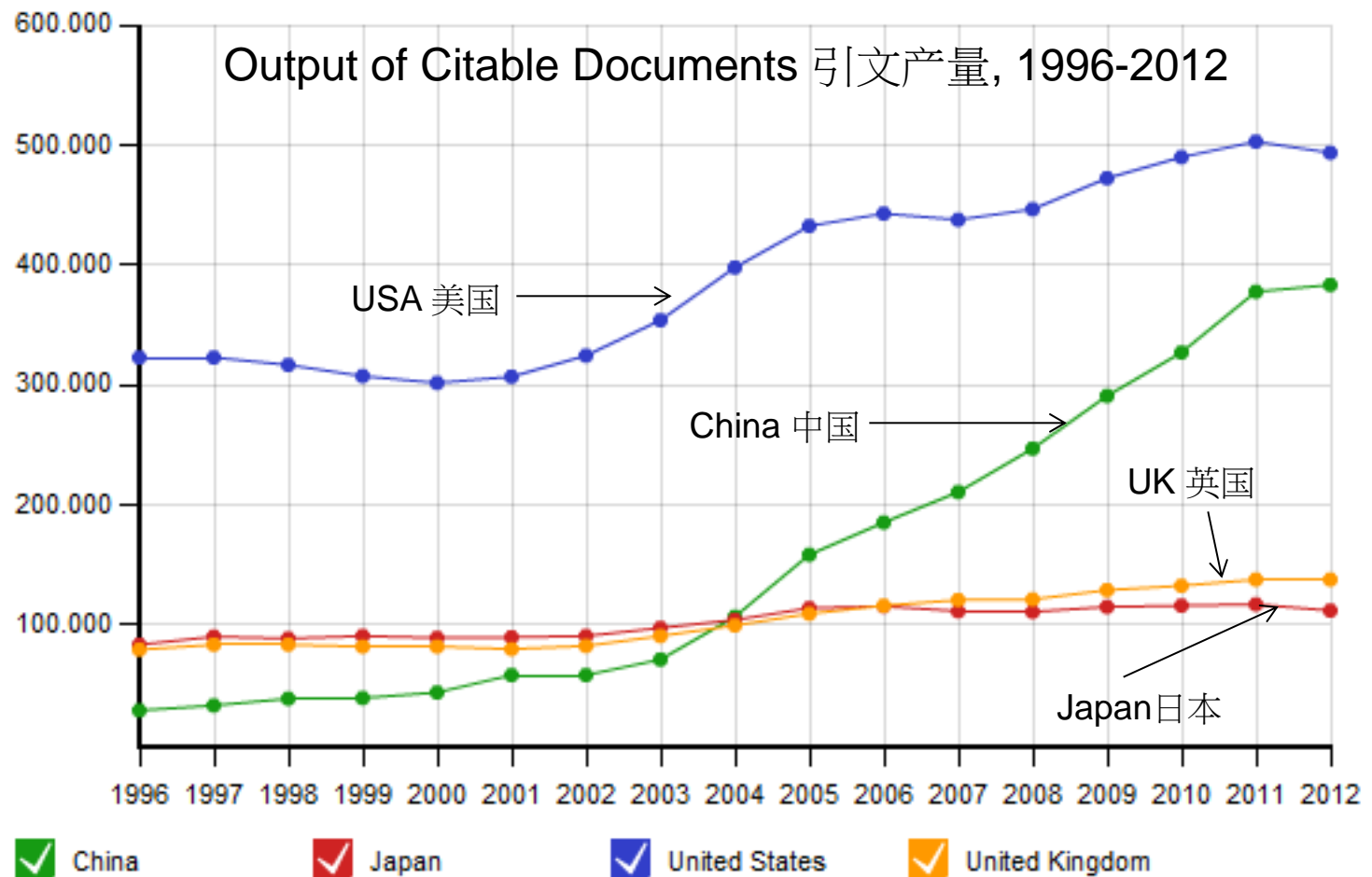
Gross Domestic Expenditure on R & D, Higher Education 用于研发的国内总开支 – 高等教育界



Source: OECD estimates based on OECD Main Science and Technology Indicators Database, 2014/1.

Retrieved June 17, 2014, <http://www.oecd.org/sti/inno/msti.htm>

Scopus Database 数据库



Output Growth 产量增长 1996 - 2012

Country	Change	%
China	+354,636	+1245%
Japan	+28,576	+34%
US	+170,497	+53%
UK	+58,326	+74%

	China	Japan	United States	United Kingdom
1996	28,481	83,317	322,840	79,087
1997	32,881	89,842	322,961	83,321
1998	38,311	88,664	316,426	83,217
1999	38,601	90,489	307,452	81,520
2000	43,598	88,851	301,550	81,626
2001	58,206	89,653	306,987	79,480
2002	57,970	90,821	324,144	82,270
2003	70,700	97,416	353,997	90,675
2004	106,672	104,254	397,851	99,339
2005	158,175	113,685	432,581	109,425
2006	185,446	115,558	443,001	115,781
2007	210,360	111,200	437,678	120,459
2008	246,986	110,873	446,407	121,113
2009	290,952	115,056	472,301	128,813
2010	327,186	115,900	490,068	132,691
2011	377,630	116,817	502,726	137,536
2012	383,117	111,893	493,337	137,413

SCImago. (2007). SJR — SCImago Journal & Country Rank.
Retrieved June 17, 2014, from <http://www.scimagojr.com>

China is a global leader in research
中国的研究活动，在全球处于领导地位

**Driven by technology, modern research is data-
and compute-intensive, integrative, and involves
multi-scale collaborations for complexity**
在科技的推动下，现代调研是数据及计算密集的、
综合性的、和涉及多种规模合作复杂性的

Research Data and Its Management

研究数据及其管理

What is Research Data?

什么是研究数据？

“... units of information observed, collected, or created during the course of research. This is not limited to **scientific data**; it includes **social science statistical** and **ethnographic data**, **humanities texts**, or **any other data** used or produced in the course of academic research, whether it takes the form of text, numbers, image, audio, video, models, analytic code or some yet-to-be-identified data type.”

“...进行研究活动时所观察、收集和产生的资料。**科学数据**以外，还包括**社科统计**和**民族学研究数据**，**人文学科文本**，以至**其他**在进行学术研究时使用和产生的**数据**，其格式则不限于文字、数目、图像、音频、视频、模型、解析代码及尚待识别的数据类型”

Erway, R. (2013). *Starting the Conversation: University –wide Research Data Management Policy* (p. 5). Dublin, OH: OCLC Research. Retrieved June 18, 2014, from <http://www.oclc.org/content/dam/research/publications/library/2013/2013-08.pdf>. Chinese translation provided by the presenter.

Benefits of Sharing Research Data

共享研究数据的益处

- **Ensure research integrity** 确保研究诚信
- **Ensure research data and records are accurate, complete, authentic and reliable** 确保研究数据和记录正确、完整、真实和可靠
- **Increase research impact** 提升研究的影响力
- **Enhance data security and minimize the risk of data loss** 增强数据安全和减少数据丢失的风险
- **Prevent duplication of effort by enabling others to use your data** 通过让其他人使用你的数据避免重复努力
- **Be accountable to public funding** 向公帑负责

Grant Requirements of Funding Bodies

资助机构补助的规定

- National Institutes of Health 国家卫生研究所
- Wellcome Trust 威康信托基金会
- Arts and Humanities Research Council 艺术与人文研究理事会
- National Science Foundation 国家科学基金会
- Canada Foundation for Innovation 加拿大创新基金会
- ...

Sharing Research Data – Growing Popularity

共享研究数据 – 日益普及

- **Global Research Council** 全球研究理事会 / 3rd annual meeting held in Beijing, May 26-28, 2014
- **EU 欧盟** / **Guidelines** on Data Management in Horizon 2020 (11 Dec 2013)
- **G8 八国集团** / Science Ministers **Statement** (13 June 2013)
- **White House Office of Management and Budget** 白宫管理和预算办公室 / **Memorandum** Open Data Policy – Managing Information as an Asset (9 May 2013)
- **OECD 经济合作与发展组织** / **Principles and Guidelines** for Access to Research Data from Public Funding (2007)

Data Repositories 数据储存库

- National repositories 国家储存库, e.g. Australian Data Archive
- Discipline-based repositories 学科储存库, e.g. National Climate Data Center
- Repositories associated with publishers 出版商参与的储存库, e.g. Elsevier 爱思唯尔, [figshare](#) (MacMillan Publishing 麥克米倫出版公司)

- Databib, hosted by Purdue University Libraries – a tool for helping people identify and locate online repositories of research data 由普渡大学图书馆主办，是一个在网上识别和寻找研究数据库的工具

Library Involvement 圖書館的參與

- Library involvement in data curation, including collaboration with their research communities – one of the top ten trends in academic libraries in 2012 (ACRL)
参与数据管理，包括与其研究团体合作，是美国学术图书馆2012年度十大趋势之一 (美国高校和学术图书馆协会)
- “Support for research data management represents a newer and arguably more challenging development in the library service portfolio” (A survey of 140 libraries in Australia, New Zealand, Ireland and the UK conducted by S Corrall in 2012)
“于图书馆服务，支持科研数据管理可算是一个较新和具挑战性的发展” (S. Corrall于2012年在140所澳大利亚、新西兰、爱尔兰和英国图书馆进行的调查)

ACRL Research Planning and Review Committee (2012). 2012 Top ten trends in academic libraries. *College & Research Libraries New*, 73, 311-320. Retrieved June 19, 2014, from <http://crln.acrl.org/content/73/6/311.full.pdf+html>

Corrall, S, Kennan, M.A. & Afzal, W. (2013). Bibliometrics and research data management services: emerging trends in library support for research. *Library Trends*, 61, 636-674. Chinese translation provided by the presenter.

Research Data Management (RDM) Services

研究数据管理服务

Store & Preserve 存储和维护 – data backup and migration, retention period

Create 创建 - plan for data creation, such as format, storage; RDM advice

Advice, Support and Training

咨询、支援与培训

Access & Share 使用和共享 – data citation, copyright, licensing

Organize 组织 – data files should be consistent; hierarchical

The Case of Hong Kong

香港地区的情况

Catching Up 趕上中 ...

- A paper on “Sharing Research Data in Hong Kong” by Professor John Bacon-Shone in June 2010
白景崇教授在2010年6月发表“香港共享研究数据”报告
- Proposed to start with data funded by Research Grant Council/University Grant Council and extend to all data collection/generation funded from public funds
建议從研究資助局 / 大学教育资助委员会资助項目的数据開始，逐步延伸到所有在公帑资助下收集 / 產生的数据
- Has yet to formulate a territory-wide policy
还没有制订一套全港性的政策

University of Hong Kong (HKU) 香港大学

- “Policy on the Management of Research Data and Record”, endorsed in principle by the University Research Committee in last December 去年12月，大学研究事务委员会原则上通过“研究数据和记录管理政策”
- Adopted the University of Oxford policy with some adaptations 除适量修改外，港大政策以牛津大学之政策为蓝本
- Major change: the need for research data to be verifiable 最重要修改是：研究数据可被验证
- A working group is finalizing the implementation plan 一个工作组正在敲定实施计划

Library Support for HKU Data Management

图书馆对港大数据管理的支援

- HKU Libraries is a key partner in implementing the University's research data management policy 香港大学图书馆是实行大学研究数据管理政策的重要伙伴
- Will upgrade the University's institutional repository, HKU Scholars Hub, to store and preserve research data centrally 将提升大学的机构典藏：香港大学学术库，以中央存储和维护研究数据
- Will describe research data with consistent metadata 将以一致的元数据描述研究数据
- Will provide researchers with access to training, support and advice 将为研究人员提供咨询服务、支援与培训
- The next step is to recruit a “Research and Data Services Librarian” 下一步是招聘一位“研究和数据服务馆员”



Is Research Data Management (RDM) a service that the library should play a part?

研究数据管理是否一种图书馆应参与的服务？

Maybe 也许 ...

- **Keep abreast of the developments in RDM on campus and beyond** 了解校园内外研究数据管理的发展
- **Enter into a dialogue with other stakeholders in your institution on RDM issues** 与机构内其他的持份者就研究数据管理议题进行对话
- **Take a proactive approach to be a key player in RDM on campus** 争取成为校园内研究数据管理的主要参与者
- **Be a leader in RDM locally, regionally and internationally** 在本地、区域和国际间作为研究数据管理的领导者



Thank you 谢谢!!

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